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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,459	12/03/2003	Masaki Shiraishi	0229-0785P	4041
2292 7590 11/30/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER KHUU, HIEN DIEU THI	
			ART UNIT 2863	PAPER NUMBER
			NOTIFICATION DATE 11/30/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

# Office Action Summary

Application No.

10/725,459

Applicant(s)

SHIRAISHI, MASAKI

Examiner

Cindy D. Khuu

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-12 and 14-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3,5-8 and 16-19 is/are allowed.
- 6) ☒ Claim(s) 9-12,14 and 20 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date 11/20/07.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 9-12, 14 and 20 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 4 and 6 of U.S. Patent No. 7,249,498. Although the conflicting claims are not identical, they are not patentably distinct from each other because Miyoshi anticipates the claimed invention as followed:

Instant Application 10/725459	US Patent Application No. 7,249,498
<p>9. A device for determining force exerted on a <u>vehicle wheel including a radially outermost annular ground contacting part, a hub and a radius part therebetween</u>, the device comprising:</p> <p>at least one sensor for measuring a <u>physical parameter</u> of the vehicle wheel <u>during rolling</u>, said at least one sensor being attached to the <u>radius part</u>;</p> <p>a memory in which a formula that calculates the <u>physical parameter</u> in terms of the force exerted on the vehicle wheel at at least one <u>predetermined measuring position</u> is stored;</p> <p>a device for locating said at least one sensor in order to measure the physical parameter when the sensor is at the predetermined measuring position; and</p> <p>a processor which, using data on the physical parameter read from said at least one sensor, computes <u>the formula to calculate the force</u> and output data on the force.</p> <p>10. The device according to claim 9, wherein said <u>physical parameter is the magnitude of radial strain</u>.</p> <p>11. The device according to claim 9, wherein said at least one sensor is a single <u>sensor fixed to the radius part</u> of the vehicle wheel.</p> <p>12. The device according to claim 9, wherein said at least one sensor is a <u>plurality of sensors arranged around the rotational axis of the vehicle wheel and fixed to the radius part of the vehicle wheel</u>.</p> <p>14. The device according to claim 9, wherein said force is <u>at least one of a vertical force, a lateral force, a longitudinal force and a self-aligning torque</u>.</p> <p>20. The method of claim 9, wherein the force is at least one of a vertical force, a lateral force and longitudinal force are forces in x-direction, y-direction and z-direction, respectively, of an xyz orthogonal coordinate system fixed to a wheel plane, and the torque is a force around the x-axis of the xyz orthogonal coordinate system.</p>	<p>1. A system for determining the magnitude of a force acting on a tire, comprising</p> <p>the tire,</p> <p>a tire strain sensor mounted on the tire, for detecting a tire strain at the mounted position, and generating data representing the tire strain, wherein said <u>mounted position is a fixed position on the tire</u>,</p> <p>a <u>sensor locator</u> for locating the sensor on the tire <u>while the tire rotates</u> together with the sensor,</p> <p>a memory in which data on relationships between the tire strain and force acting on the tire at each of <u>measuring points</u> are stored, and</p> <p>a <u>processor computing the magnitude of the force</u>, using the data representing the tire strain obtained from the tire strain sensor and the data on the relationships acquired from the memory based on the data on the sensor location obtained from the sensor locator, whereby <u>the magnitude of the force acting on the tire is determined by utilizing the tire strain caused by the force</u>.</p> <p>4. The system according to claim 1, wherein said <u>tire sensor is disposed in each of circumferentially different positions</u>, and <u>the number of the sensors is at least three</u>.</p> <p>6. The system according to claim 5, wherein said force is a force in each of <u>three translational motion directions</u>...</p>

\*Underlining claims are corresponding paraphrases subject matter between Instant Application and Patent Application.

"Vehicle wheel including a radially outermost annular ground contacting part, a hub and a radius part therebetween" are inherent parts of the tire. Miyoshi teaches that tires are equivalent to vehicle wheels (Miyoshi; column 12, line 66).

Tire strain is a physical parameter as disclosed by Applicant (Shiraishi; Abstract, line 4).

Sensor mounted on a fixed position on the tire as indicated in Miyoshi's teaching which are sensors (Fig. 15; S5, S7, S1 and S3) attached to the radius part of the wheel.

The measuring points as indicated in Miyoshi's teaching clearly are the predetermined measuring positions (Figs. 14-15; S5 at 180°, S7 at 270°, S1 at 0° and S3 at 90°).

It is well known in the art that a processor computing the magnitude of the force requires an application of a formula in order to process the computation.

The three sensors as taught by Miyoshi (Figs. 14-15) clearly shown the positions of plurality of sensors fixed to the radius part of the wheel.

It is inherently taught by Miyoshi that the three translational motion directions are the vertical, lateral and longitudinal forces of xyz directions, coordinate system fixed to a wheel plane (Fig 1, column 2, lines 45-57).

### ***Response to Arguments***

Applicant's arguments filed 08/30/07, with respect to the 35 U.S.C. 103(a) rejections have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, a new nonstatutory obviousness-type double patenting have been applied above.

### ***Allowable Subject Matter***

Claims 9-12, 14 and 20 would be allowable if rewritten or amended to overcome the double patenting rejection(s) set forth in this Office action or upon filing of a terminal disclaimer.

Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1-3, 5-8, 16-19 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for the allowance of claim 1 is the inclusion of the limitation "calculates the physical parameter in terms of the magnitude of the force exerted on the vehicle wheel, using the obtained data and wherein the physical parameter is the magnitude of a radial strain in the radius part".

The primary reason for the allowance of claims 6-8 is the inclusion of the limitation "locating a sensor for the physical parameter which is fixed to the radius part; and reading the sensor when the sensor is at said at least one predetermined measuring position".

The prior art of record, taken alone or in combination, fails to disclose or render obvious.

Claims 2-3, 5 and 16-19 are allowed due to their dependency on claims 1 and 6-8.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Fax/Telephone Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cindy D. Khuu whose telephone number is (571) 272-8585. The examiner can normally be reached on M-F, 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ame 11/20/07

  
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